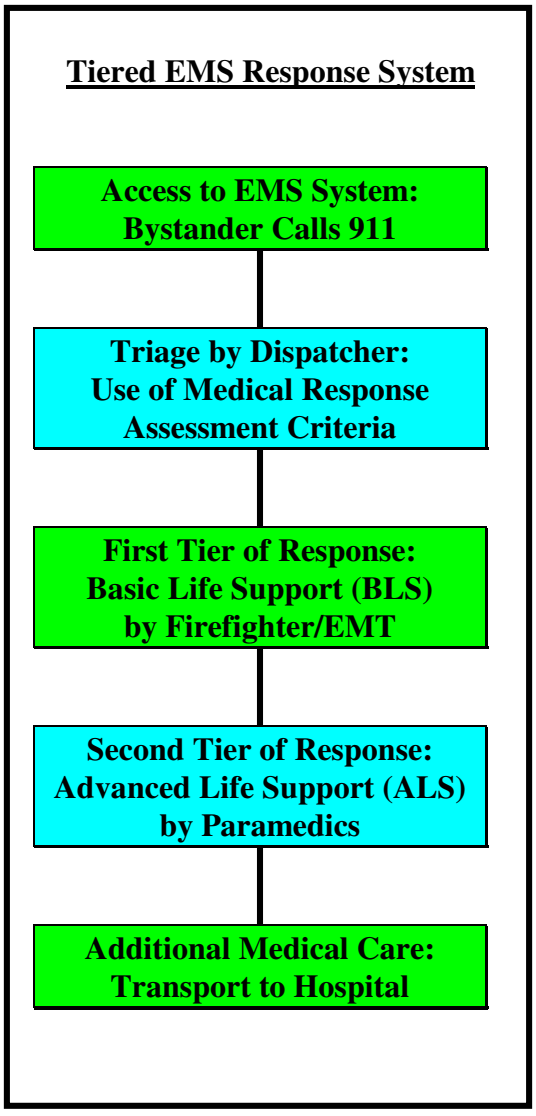
Part I: EMS System Review

A. The EMS / Medic One Tiered System

The **Emergency Medical Services (EMS) / Medic One system** provides an internationally regarded regional service to the citizens of Seattle and King County, responding in an area of over 2,000 square miles and serving a population of approximately 1.7 million. The EMS/Medic One system operates in a coordinated partnership between King County, various cities, fire districts, private ambulance companies, and others involved in providing high quality pre-hospital medical care. The EMS response system is tiered to assure that 911 calls receive effective medical care by the most appropriate care provider.

There are several **major components** in the regional tiered EMS/Medic One system and they are described below:

- **Access:** Bystander accesses the EMS system by calling 911.
- **Dispatcher Triage:** Calls to 911 are received and triaged by trained professional dispatchers in seven dispatch centers throughout King County. Most dispatchers use the Criteria Based Dispatch (CBD) Guidelines to provide uniform triaging to callers.
- **Basic Life Support (BLS) services:** BLS personnel provide the first level of response and are staffed by firefighters trained as Emergency Medical Technicians (EMTs). BLS units arrive at the scene in an average of about six minutes.
- **Advanced Life Support (ALS) services**: ALS services are provided by six paramedic agencies responding to patients with more critical or life-threatening injuries and illnesses. Paramedics respond to about 35% of all EMS responses.
- **Transport to Hospitals:** Some patients require additional medical care and are transported to hospitals for further attention.



B. Background to the EMS Strategic Initiatives

This year, for the first time, the EMS Annual Report includes a section that highlights the major trends in the regional EMS system. The central theme for this year's report is to provide an initial assessment of the impact of the EMS Strategic Initiatives on the regional system.

This focus is distinctive because 2002 marks the completion of the 1998-2003 EMS Strategic Initiatives and it is useful to see what impact these initiatives have had - or will have in the future - on the regional system. Details of the initiatives themselves and their respective status reports begin on page 14. It is also important to mention briefly new future challenges that are emerging just a few short months after the passage - by more than 80% of the votes - of the 2002-2007 EMS levy.

As part of the preparation for the 1998-2003 EMS levy, a broad-based, regional EMS Strategic Plan Steering Committee was formed in 1996. The committee was tasked with developing a regional plan to form the operational and financial basis for the levy proposal. This group included representatives from a broad group of constituencies, including physicians, fire chiefs, fire commissioners, paramedics, firefighter/EMTs, the Washington State Council of Firefighters, health plan providers, and representatives from the EMS Division and Public Health - Seattle & King County.

The 1998-2003 EMS Strategic Plan was intended to build upon previous regional EMS Master Plans and maintain the strong structural elements of the regional EMS system, while providing some clear future policy directions for fire departments and paramedic providers across the county. Most specifically, the planning group was charged with developing new EMS policies for the regional system that would meet emerging challenges for the regional EMS system.

These challenges were seen in four key questions or issue areas:

1) Is the current levy funding sufficient to sustain ongoing expansion of paramedic service capacity to meet continued growth?

2) What is the most effective and efficient role for EMS providers?

3) Can existing EMS services be utilized more efficiently to manage the need for future capacity and expansion?

4) In view of potential funding limitations, how should decisions about paramedic services, basic life support services provided by fire departments, and regional services funding be made in the future?

In the remainder of this section, some examples of how the EMS Strategic Initiatives have addressed these questions will be presented.

C. Impact of the Strategic Initiatives

Despite the November 1997 EMS levy failure, the regional EMS community maintained a strong commitment to the completion of the 12 major initiatives. Each strategic initiative required the leadership and participation of dedicated staff from the EMS Division, physicians, fire departments, paramedic providers, dispatch agencies, and labor across King County. The completion of the initiatives themselves is a testament to the cooperation, dedication, and hard work of these representatives. Not surprisingly, the impact of the strategic initiatives on the regional EMS system varies from initiative to initiative, and is closely tied to when projects began and the relatively complexity of the projects themselves. Uniformly, the initiatives all began modestly and have grown with time as they have been incorporated into EMS provider activities. Several of the initiatives were completed very early and provided good models for other efforts to follow.

Early efforts began with establishment of the **EMS Advisory Committee** in December 1997 (see page 63 for a list of the current participants). Although ad hoc regional groups had convened in the past to address specific policy or planning issues, development of the EMS Advisory Committee marked the first time a standing regional policy group had been formed. The EMS Advisory Committee meets quarterly and offers an excellent forum for decision-making, providing feedback to the EMS Division, and development of major policy recommendations concerning paramedic services, basic life support services, and the direction of regional services. Subcommittees of this group have been extremely active in developing every strategic initiative. For example, the paramedic provider subcommittee has met on issues ranging from vehicle replacement, review of future paramedic service needs, and annual paramedic costs projections. The EMS Advisory Committee and its subcommittee groups were also very active in developing recommendations that were eventually incorporated into the 2002-2007 EMS levy proposal.

The **EMS Regional Purchasing Program** was another early success, beginning in April 1999, and showing continued expansion since its inception. In early 2002, this project included 22 fire departments with estimated expenditures of nearly $800,000 and estimated annual regional savings of $200,000. As the list of medical equipment and supplies grows, including those items used specifically by paramedic units, the regional savings achieved by this initiative will increase. As another important feature of this program was that it was developed without a complex administrative structure or significant additional staff costs. This program admirably demonstrates how a regional effort can assist in making EMS more financially efficient without increasing administrative costs.

A similar effort addressing the efficient use of EMS resources is exemplified by the paramedic **Vehicle Replacement Plan**. The initial pilot emphasized using a larger, heavier vehicle that could potentially last as long as four or five years and perhaps be more efficient simply by needing replacement less frequently. However, that initial pilot project demonstrated that these specific vehicles were not generally suited to all parts of the region, and that they were uncomfortable for passengers. Another approach - using a model developed by Seattle Medic One - was to replace the chassis of paramedic units and reuse the patient compartment rather than

replace the entire unit. This approach is estimated to save 25%-30% of the cost of a new unit. Paramedic providers are anticipating moving to this model when the opportunity arises.

There have been significant initiatives aimed at making EMS more efficient and effective. These initiatives include the **Telephone Referral Project (TRP)** and the **Appropriate Destination and Patient Treatment Project (ADAPT)**. In the TRP project, emergency dispatchers were trained to transfer a specific set of non-urgent cases to a consulting nurse line. This project was extensively piloted and evaluated at both the Eastside Communications Center and Valley Communications Center. The project was shown to be safe for patients, with a high degree of patient satisfaction. The number of cases observed to date is lower than anticipated. In the ADAPT project, patients calling 911 for emergency medical services were given the opportunity to be transferred to a local urgent care clinic - when appropriate for their level of care - rather than be transported to a hospital emergency department. Again, although the number of patients treated in this way has been relatively small and limited to three departments, there is great potential to increase this type of transport across the region.

One of the most effective ways to positively affect the number of patients seen in the EMS system is through **prevention and public education**, listed as a general goal in the EMS Strategic Initiatives. The EMS Division has established effective partnerships with fire departments, the Regional EMS and Trauma Council, and the King County Fire and Life Safety Association, and Public Health - Seattle & King County around several prevention areas. These programs include Fall Factors Prevention (preventing falls among the low income, high-risk elderly), Think Again (prevention of drinking and driving among high school age children), and Bicycle Helmet Program (promotes wearing helmets).

Another of the Strategic Initiatives targets **paramedic dispatch triage criteria**. If done safely and appropriately, it is the most likely of the strategic initiatives to manage the rate of growth in paramedic calls in the future and help increase the efficiency of this resource in our system. This initiative could have very significant financial implications since each paramedic unit staffed by two paramedics is funded at over $1.2 million in 2002. This initiative has required extensive review of the Criteria Based Dispatch system by the Dispatch Review Committee, review of all proposed changes by the EMS Medical Directors, extensive training of dispatchers, and careful evaluation of preliminary results. Final results of this initiative will be known later in 2002, but preliminary results are encouraging. If these initial trends are sustained throughout the remainder of the study period, there may be an impact on slowing the schedule with which future paramedic services are added.

D. EMS Systems Review Summary

Implementation of the 1998-2003 EMS Strategic Plan, including the twelve strategic initiatives, has required unprecedented efforts and coordination on the part of the thirty-six EMS providers in King County. The EMS Division recognizes that completion of the initiatives would not have been possible without the persistence and dedication of EMS providers at all levels.

Major characteristics regarding the impact of the strategic initiatives on the EMS system in King County include:

- The strategic initiatives foster extensive regional participation and strengthen partnerships.
- The strategic initiatives target EMS across the spectrum of service delivery, including prevention, dispatch, Basic Life Support services provided by fire departments, paramedic services, and patient transport destination.
- Quality improvement activities in BLS and data gathering have helped provide a blueprint for systems review, and improved the quality of data provided by fire departments and paramedic providers.
- The strategic initiatives help delineate areas, especially for appropriate non-urgent patients, where other non-traditional approaches to patient care and transport options may be effective (e.g. TRP and ADAPT).
- Some of the initiatives have demonstrated that effective regional programs can generate substantial regional savings without increasing administrative costs.

The EMS Division will continue to thoroughly review the EMS system in a manner consistent with the spirit of the 1998-2003 Strategic Plan. This includes looking for ways to maintain the highest level of quality patient care by providing innovative leadership in areas of research and delivery of service, improving operational efficiencies, and developing cost-saving programs. The 2002 Strategic Plan Update supports this effort by maintaining the strategic initiatives now incorporated into EMS' standard practice and encouraging development of additional initiatives with similar objectives.